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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,148	10/27/2003	Francis Parsche	GCSD-1477(51337)	3028
27975	7590	06/29/2005	EXAMINER	
ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST P.A. 1401 CITRUS CENTER 255 SOUTH ORANGE AVENUE P.O. BOX 3791 ORLANDO, FL 32802-3791			CHEN, SHIH CHAO	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/694,148	<b>Applicant(s)</b> PARSCHE, FRANCIS	
	<b>Examiner</b> Shih-Chao Chen	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-29 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 11-15 is/are rejected.
- 7) ☒ Claim(s) 7-10 and 16-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/27/03 &amp; 4/9/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: on page 9, line 31, "1/22 wavelengths" should be changed to -- $\frac{1}{2}$  wavelength--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4-6, 11 and 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Mimura et al. (U.S. Patent No. 6,600,451).

Regarding claim 1, Mimura et al. teaches in figures 3-14 an antenna comprising: a radiating ring element [701, 702] formed as a spherical sector having about a one-half wavelength circumference in natural resonance for obtaining uniform current distribution and enhancing the gain relative to the size of the antenna (See Abstract).

Regarding claim 4, Mimura et al. teaches in figures 3-14 an antenna according to Claim 1 wherein the radiating ring element [701, 702] includes a capacitive element [706, 707] formed therein for forcing the radiating ring element to resonance.

Regarding claim 5, Mimura et al. teaches in figures 3-14 an antenna according to Claim 4 wherein the radiating ring element [701, 702] has a gap (See Fig. 12) formed therein and operative as the capacitive element [706, 707].

Regarding claim 6, Mimura et al. teaches in figures 3-14 an antenna according to Claim 5, and further comprising a capacitor [706, 707] mounted within the gap.

Regarding claim 11, Mimura et al. teaches in figures 3-14 an antenna comprising: a radiating ring element [701, 702] formed as a spherical sector and having a capacitive element [706, 707] formed therein for forcing the radiating ring element to resonance and a circumference that enhances the gain relative to the size of the antenna.

Regarding claim 14, Mimura et al. teaches in figures 3-14 an antenna according to Claim 11 wherein the radiating ring element [701, 702] has a gap (See Fig. 12) formed therein operative as the capacitive element.

Regarding claim 15, Mimura et al. teaches in figures 3-14 an antenna according to Claim 11, and further comprising a capacitor [706, 707] mounted within the gap.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (Cited above).

Mimura et al. discloses the claimed invention except for the diameter of the radiating ring element is about twice its height. It would have been an obvious matter of design choice to have the diameter is about twice its height, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

6. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al. (Cited above).

Mimura et al. discloses the claimed invention except for the spherical sector comprises a one-third pi sector of a sphere. It would have been an obvious matter of design choice to have the one-third pi sector of a sphere, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art.

***Allowable Subject Matter***

7. Claims 20-29 are allowed.

8. Claims 7-10 and 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claims 7-10, 16-19 and 20-29 is the inclusion of the limitation of a variometer that feeds the radiating ring element and operative for vary the feed impedance. It is this limitation found in each of the claims, as

it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-Chao Chen whose telephone number is (571) 272-1819. The examiner can normally be reached on Monday-Friday from 7 AM to 4:30 PM, First Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shih-Chao Chen  
Primary Examiner  
Art Unit 2821

*Shih-Chao Chen*  
**SHIH-CHAO CHEN**  
**PRIMARY EXAMINER**

SXC  
June 15, 2005